

IN THE CLAIMS

JC17 Rec'd PCT/PTO 20 SEP 2005

Please amend the claims as follows:

Claims 1-22 (Canceled).

Claim 23 (New): A method for producing a glass sheet coated with a titanium oxide thin film, which comprises adhering mist of titanium element-containing liquid particles to the surface of a glass substrate so as to coat the surface of the glass substrate with the liquid, thereby forming thereon a titanium oxide thin film having a micro-roughness on the surface thereof.

Claim 24 (New): The method for producing a glass sheet as claimed in claim 23, wherein after coated with the liquid, the glass substrate is once dried and then repeatedly coated.

Claim 25 (New): The method for producing a glass sheet as claimed in claim 23, wherein an air spray gun is used in coating with the liquid, the air pressure applied to the air spray gun is from 0.13 to 0.8 MPa, and the jet mist amount out of the nozzle of the gun per unit time is from 1 to 10 ml/min.

Claim 26 (New): The method for producing a glass sheet as claimed in claim 23, wherein plural air spray guns are used at the same time in coating with the liquid, and the coating is so controlled that the mist from each air spray gun does not overlap with each other.

Claim 27 (New): The method for producing a glass sheet as claimed in claim 25, wherein the coating is carried out while the distance between the nozzle tip and the surface of the glass substrate is kept from 10 to 50 cm.

Claim 28 (New): The method for producing a glass sheet as claimed in claim 25, wherein the glass substrate is previously heated before coated with the liquid.

Claim 29 (New): The method for producing a glass sheet as claimed in claim 25, wherein the coating is carried out while the glass substrate is moved and the air spray gun is scanned in the direction crossing the moving direction.

Claim 30 (New): The method for producing a glass sheet as claimed in claim 23, wherein an ultrasonic spray is used in coating with the liquid, and the liquid temperature in the liquid tank of the ultrasonic spray is set higher by from 5 to 90°C than the surface temperature of the glass substrate.

Claim 31 (New): The method for producing a glass sheet as claimed in claim 23, wherein after the surface of the glass substrate has been coated with the liquid, it is heated to form a titanium oxide thin film thereon.

Claim 32 (New): The method for producing a glass sheet as claimed in claim 31, wherein the surface coated with the liquid is heated up to a maximum temperature of from 550 to 700°C, and then cooled under the condition satisfying the following formula (1):

$$0.2 \leq a/t^2 \leq 5 \quad (1)$$

wherein a represents the time (second) taken in cooling the surface from 500°C to 200°C,

t represents the thickness of the glass substrate (mm).

Claim 33 (New): The method for producing a glass sheet as claimed in claim 23, wherein the glass substrate contains from 5 to 15 % by weight of an alkali metal.

Claim 34 (New): The method for producing a glass sheet as claimed in claim 23, wherein the area of the glass substrate is at least 0.5 m².

Claim 35 (New): The method for producing a glass sheet as claimed in claim 23, wherein after the surface of the glass substrate is washed with an acidic aqueous solution and a surfactant-containing aqueous solution, it is coated with the liquid.

Claim 36 (New): The method for producing a glass sheet as claimed in claim 23, wherein the titanium element content of the liquid is from 0.1 to 10 % by weight.

Claim 37 (New): The method for producing a glass sheet as claimed in claim 23, wherein the liquid is a sol that contains titanium oxide particles.

Claim 38 (New): The method for producing a glass sheet as claimed in claim 23, wherein the mean thickness of the titanium oxide thin film to be formed is from 0.02 to 1 μm.

Claim 39 (New): The method for producing a glass sheet as claimed in claim 23, wherein the titanium oxide thin film to be formed comprises anatase-type titanium oxide.

Claim 40 (New): The method for producing a glass sheet as claimed in claim 23, wherein the ten-point mean roughness R_z , as defined by JIS B, of the surface of the titanium oxide thin film to be formed is from 5 to 50 nm.

Claim 41 (New): The method for producing a glass sheet as claimed in claim 23, wherein the glass sheet has a haze value of at most 5 %.

Claim 42 (New): A method for producing a glass sheet coated with a titanium oxide thin film, which comprises applying a titanium element-containing liquid to the surface of a glass substrate having a surface compressive stress of at most 10 MPa, then heating the liquid-coated surface up to a maximum temperature of from 550 to 700°C, and cooling it under the condition satisfying the following formula (I) to thereby make the glass substrate have a surface compressive stress of from 20 to 250 MPa:

$$0.2 \leq a/t^2 \leq 5 \quad (1)$$

wherein a represents the time (second) taken in cooling the surface from 500°C to 200°C, t represents the thickness of the glass substrate (mm).

Claim 43 (New): The method for producing a glass sheet as claimed in claim 42, wherein the time for which the temperature of the surface coated with the liquid falls within a temperature range of from 550 to 700°C is from 20 to 500 seconds.

Claim 44 (New): The method for producing a glass sheet as claimed in claim 42, wherein the surface is heated under the condition satisfying the following formula (2):

$$5 \leq b/t \leq 30 \quad (2)$$

wherein b represents the time (second) taken in heating the surface from 200°C to 500°C,

t represents the thickness of the glass substrate (mm).

Claim 45 (New): The method for producing a glass sheet as claimed in claim 42, wherein the glass substrate contains from 5 to 15 % by weight of an alkali metal.

Claim 46 (New): The method for producing a glass sheet as claimed in claim 42, wherein the area of the glass substrate is at least 0.5 m².

Claim 47 (New): The method for producing a glass sheet as claimed in claim 42, wherein after the surface of the glass substrate is washed with an acidic aqueous solution and a surfactant-containing aqueous solution, it is coated with the liquid.

Claim 48 (New): The method for producing a glass sheet as claimed in claim 42, wherein the titanium element content of the liquid is from 0.1 to 10 % by weight.

Claim 49 (New): The method for producing a glass sheet as claimed in claim 42, wherein the liquid is a sol that contains titanium oxide particles.

Claim 50 (New): The method for producing a glass sheet as claimed in claim 42, wherein the mean thickness of the titanium oxide thin film to be formed is from 0.02 to 1 μm.

Claim 51 (New): The method for producing a glass sheet as claimed in claim 42, wherein the titanium oxide thin film to be formed comprises anatase-type titanium oxide.

Claim 52 (New): The method for producing a glass sheet as claimed in claim 42, wherein the ten-point mean roughness Rz, as defined by JIS B, of the surface of the titanium oxide thin film to be formed is from 5 to 50 nm.

Claim 53 (New): The method for producing a glass sheet as claimed in claim 42, wherein the glass sheet has a haze value of at most 5 %.